

REMARKS

Summary Of The Office Action & Formalities

Claims 1-12 are all the claims pending in the application. By this Amendment, Applicants are amending claims 1, 7, 9 and 10, and adding new claims 13-18. No new matter is added.

Claims 8-12 are rejected under 35 U.S.C. § 112, second paragraph, for the reason set forth at page 2 of the Office Action. Applicants are amending claims 8-10 to overcome this rejection. Applicants' amendments merely clarify language in the claims and are not deemed nor intended to be narrowing amendments surrendering any equivalents.

The prior art rejections are summarized as follows:

1. Claims 1-12 are rejected under 35 U.S.C. § 102(b) as being anticipated by Kusano, et al. (USP 6,099,414).

2. Claims 1-12 are rejected under 35 U.S.C. § 102(b) as being anticipated by Minabe (USP 5,961,394).

Applicants respectfully traverse.

Claim Rejections - 35 U.S.C. § 102

1. Claims 1-12 In View Of Kusano, et al.

In rejecting claims 1-12 in view of Kusano, et al., the grounds of rejection state that

Kusano, et al. discloses a method of manufacturing a golf club where its club parts are welded together by laser welding.
(Abstract and Col. 4, lines 1-50).

Office Action at page 3.

Anticipation, under 35 U.S.C. § 102, requires the applied reference to teach every aspect of the claimed invention either explicitly or impliedly. Any feature not directly taught must be inherently present. See Manual of Patent Examining Procedure § 706.02. Applicants respectfully submit that Kusano et al. does not meet this requirement for pending claims 1, 3-7, and 9-12 and, therefore, does not anticipate these claims.

As exemplified in Fig. 4, Kusano et al. discloses an iron club head having a main head body 10, and a composite material block made of a pure titanium member 8 and tungsten member 9 metallurgically bonded together by explosive-welding. This composite material block is formed into the profile of the sole face by separately welding the pure titanium member 8 and the joined portion 6 of the head body 10, which is also made of titanium. Accordingly, Kusano, et al. discloses the use of explosive-welding for bonding only the bonding planes of the composite block.

Amended independent claims 1 and 7 of the present invention, on the other hand, are directed to a wood-type golf club having a hollow head body. The claims recite a plurality of metal pieces (claim 1) or plates (claim 7) made of forged or rolled material are fixed together by means of laser welding such that these metal pieces or plates appear on a common surface of the head. When using a plurality of metal pieces or plates that are of different metals, the pieces or plates provide a visibly aesthetic effect.

Thus, in view of at least the foregoing distinctions, claims 1, 3-7, and 8-12 are believed to be allowable over Kasano et al.

2. Claims 1-12 In View Of Minabe.

In rejecting claims 1-12 in view of Minabe, the grounds of rejection state that

Minabe discloses a method of manufacturing a golf club where its club parts are welded together by laser welding. (Col. 3, lines 25-37, Col. 3, lines 59-67), and Col. 4, lines 1-14).

Office Action at page 3.

Minabe discloses a golf club having a face member 10 welded to the head body 12 using a laser welding method (see Fig. 1).

According to the present invention, on the other hand, the wood-type golf club has a hollow head body comprising a shaft, and a metal head attached to the shaft, the metal head including a plurality of metal plates or pieces, wherein said metal plates or pieces are made of forged or rolled material appearing on a common surface of the head and are fixed together by means of laser welding. Minabe clearly does not teach or suggest these features.

In the present invention, the metal pieces or plates are made of forged or rolled material so that these members can be welded by laser welding to form a composite part having fine structural grains and small structural defects. Furthermore, the laser-welded metal members can be processed by post-machining (e.g., plastic working such as press forming), because the forged or rolled material has fine structural grains compared with a golf club head formed by the molding method used in Minabe.

Regarding claims 3 and 9, when a face portion is composed of plurality of metal pieces having different thicknesses that are welded together, the elastic modulus of the face portion can be changed locally to thereby increase the resilience of the face portion.

Moreover, the crown portion and side portion can be made thinner so that a larger wood-type golf club head having lower center of gravity can be realized by using forged or rolled material, because forged or rolled material can be made to a specified thickness with a higher accuracy than the molded material used in Minabe.

Additionally, the laser welding ensures that the variations in weight between manufactured clubs is small so that golf clubs head having constant thickness and weight can be manufactured.

Clearly, therefore, Minabe does not teach or suggest all the limitations of the pending claims. Therefore, the Examiner is kindly requested to reconsider and withdraw the rejection of these claims in view of Minabe.

New Claims

For additional claim coverage merited by the scope of the invention, Applicants are adding new claims 13-18, which are believed to be allowable at least by reason of their respective dependencies.

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

Submitted herewith is a Petition For Extension Of Time with fee.

AMENDMENT UNDER 37 C.F.R. § 1.111
US Application No. 10/000,219

Q67539

Applicants hereby petition for any extension of time which may be required to maintain the pendency of this case, and any required fee, except for the Issue Fee, for such extension is to be charged to Deposit Account No. 19-4880.

Respectfully submitted,



Raja Saliba
Registration No. 43,078

SUGHRUE MION, PLLC
Telephone: (202) 293-7060
Facsimile: (202) 293-7860

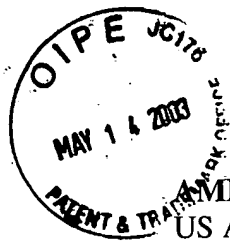
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PATENT TRADEMARK OFFICE

Date: May 14, 2003



AMENDMENT UNDER 37 C.F.R. § 1.111
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Q67539

APPENDIX
VERSION WITH MARKINGS TO SHOW CHANGES MADE

IN THE CLAIMS:

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Claims 2 and 8 are canceled.

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The claims are amended as follows:

1. (Amended) A golf club of wood-type having hollow head body comprising:

a shaft; and

a metal head attached to the shaft, the metal head including a plurality of metal pieces;

and

wherein said metal pieces are made of forged or rolled material and appear on a common surface of the head and are fixed together by means of laser welding.

7. (Amended) A golf club of wood-type having hollow head body comprising:

a shaft; and

a metal head attached to the shaft, the metal head including a portion formed through plastic working of a compounded metal plate fabricated through joining a plurality of metal plates made of forged or rolled material by means of laser welding[.]; and

wherein the compounded metal plate is fabricated by fixing together by laser welding metal pieces that appear on a common surface of the head.

9. (Amended) A golf club according to claim 7, wherein the compounded metal plate is fabricated [through mutual] by fixing together by laser welding [of] metal pieces which have different thicknesses[, the mutual fixing being effected by means of laser welding].

10. (Amended) A golf club according to claim 7, wherein the compounded metal plate is fabricated [through mutual] by fixing together by laser welding [of] metal pieces made of different metals[, the mutual fixing being effected by means of laser welding].

Claims 13-18 are added as new claims.